

PROBLEMS AND PERSPECTIVES OF CREATION AND COMMERCIALIZATION OF INTELLECTUAL PRODUCTS IN HIGHER EDUCATIONAL ESTABLISHMENTS

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Abstract. The article is devoted to the analysis of problems and prospects for the creation and commercialization of intellectual products in higher educational establishments and the development of international cooperation in this field.

Keywords: education, higher education establishments, intellectual products, creation, commercialization, international cooperation.

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Introduction

The transformation of modern society from industrial to post-industrial one presents new challenges for humanity. The main factors that determine changes and transformations in society are globalization, intensification of international cooperation, the development of knowledge economy and the emergence of information society. Taking into account the significant influence of innovations on the economic life of humanity, the intangible components of the successful conduct of economic activity at all levels are gaining importance, namely: intellectual products, intellectual property, intellectual capital, intellectual resources as well as intellectual potential.

Formulation of research objectives. The purpose of the article is to generalize the types of intellectual products that can be created in higher education establishments, assess the possibilities of their commercialization and the prospects for international cooperation in this field.

Theoretical and methodological foundations of creation and commercialization of intellectual products in higher educational establishments

The national economies of developed countries are innovation-oriented. The development of modern business is closely related to the provision of innovations. The volume of venture capital in the US is estimated at hundreds of billions of dollars. And the NASDAQ stock exchange of high-tech companies in its activity is in no way inferior to any traditional stock exchange. With the acceleration of all processes in the information society intellectual products can become a means of foreseeing future human needs.

The term «intellectual product» implies the results of intellectual, mental, spiritual and creative activity, embodied in discoveries, inventions, patents, scientific reviews and reports, projects, efficiency-improvement suggestions, works of literature, art, music, etc.

(Mocherny, 2000). An intellectual product is created by an individual in the process of mental work. Formal (routine) and creative mental working processes differ.

As a result of formal (routine) mental work intellectual products of the first level are produced, for example, different types of reports. A product obtained as a result of formal mental work can be considered the intellectual product of Type 1. Intellectual products of this type include copies of works of art, patterns of behavior, technical, economic, statistical calculations and preparation of formalized documents.

The product obtained as a result of creative mental work can be considered the intellectual product of Type 2. Such products are more valuable. The products of this type include inventions, industrial designs, useful models, trade marks of goods and services, copyright objects, computer programs and databases, topologies of integrated circuits, performance and productions of pieces of art. The intellectual product of the second type is intellectual property with legal protection. Initially the notion of intellectual property was introduced at the Convention which established the World Intellectual Property Organization in 1967.

The process of creating an intellectual product, acquiring property rights, introducing, using and making a profit is fundamentally different from the material type of property. Non-proprietary rights to an intellectual product of the second type, as an object of intellectual property, belong to a specific person - the author. The main feature of property rights to intellectual products is the lack of extraterritorial effect of these rights, which lies in the fact that the owner of intellectual property rights will have the protection of his rights only in the territory of the state where these rights were obtained.

In Ukraine legal entities and individuals can become owners of intellectual property in the following ways: by registering rights to intellectual property or in accordance with the contracts of disposal of property rights. According to Art. 1107 of the Civil Code of Ukraine (2003) there are the following types of contracts in the field of intellectual property: the agreement on the transfer of exclusive proprietary rights of intellectual property; the agreement on the joint disposal of exclusive property rights, the license agreement and other types of contracts. One of the contractual constructions is a license to use the object of intellectual property rights, which is a one-way transaction and can not be considered as a type of contract.

It should be noted that the license can be issued as an independent document or by way of concluding a license agreement. New to our legislation is a contract of commercial concession (*The Civil Code of Ukraine, 2003: Chapter 76*). The subject of a commercial concession contract is the right to use commercial names, trade marks, industrial designs, inventions, commercial secrets, commercial experience as well as business reputation.

Enterprises may enter into other contracts with respect to intellectual property objects. The main thing is that their conditions should not contradict prescriptive and legislative acts of Ukraine. In order to recognize its proprietary rights to intellectual property in another state, the author or proprietor of the property rights must once again apply for the document confirming ownership. Rights to intellectual property have a number of features: a limited period of protection; special order of transfer; specific content.

Intellectual products that are protected by the documents of intellectual property rights have certain peculiarities in comparison with material products:

- 1) all intellectual products are created as a result of mental work and manifestation of human talents in the field of science, technology, literature and art;
- 2) intellectual products have non-material form;

- 3) intellectual products have their own evaluation;
- 4) intellectual products can be used by an unlimited number of people;
- 5) intellectual products act as carriers of certain information;
- 6) intellectual products must have legal protection;
- 7) it is expedient that intellectual products should be commercialized and bring profit to their owners, which emphasizes their economic nature.

According to the research conducted, the number of innovations in various sectors of the economy of Ukraine, especially those with legal protection: inventions, useful models and industrial designs, is increasing insignificantly.

In many cases the research activity of the graduation projects is intended for use also outside the higher educational establishment that enables graduates to communicate with various specialists. Problems solved in complex graduation projects are often connected with the participation in exhibitions, public and international programs, publications. They bring invaluable experience to the students.

The results of research obtained during the implementation of a complex graduation project may be published in the form of articles, abstracts of reports at scientific conferences or executed in the form of an application for an invention, a useful model or industrial design. A comprehensive diploma project, as a scientific and practical solution to a particular problem, is a specific intellectual product that may include separate intellectual products (e.g. applications for useful models or industrial designs).

From the pedagogical and educational point of view, the creation of joint graduation projects by students of different specialties will contribute to the development of creativity which is crucial for the formation of the personality of the graduate as a future specialist.

The joint work of students in a single team contributes to their ability to generalize the concept; their autonomy and independence of character; the ability to communicate with a wide range of people, and not only in personal, linguistic contact, but also to deal with written texts, drawings, diagrams, schemes; propensity for analytical and research work; discipline, perseverance, diligence, willingness to set and solve problems, mental activity; the ability to plan their activities and to critically evaluate its results; criticisms of projects and products performed by others; the ability of self-affirmation, the ability to persuade others in their point of view to solve the problem; a sense of responsibility to society for the work they are doing.

The realism of integrated graduation projects, the ability to execute them at a high level are a prerequisite for achieving more progressive results in learning. It is extremely important that as a topic of integrated graduation project, students are offered innovative ideas, on the basis of which it is possible to design future applications for industrial designs, patents for inventions and useful models.

A diverse community of students develop skills of critical way of thinking and their application in business. These opportunities are suited to the various processes of complex conventions anticipating trends and improving the world – the innovations implemented by graduates who have to defend their integrated graduation projects are important for future development.

Solving problems associated with a graduation project provides a real opportunity of thinking, evaluating, synthesizing and offering certain measures, solutions or models working in a team. Italian designer and educator B. Munari insists that students must learn to act and help each other (*Munari, 2008*).

For example, the participation of students in the implementation of an integrated graduation project in the fashion industry requires special attention to each stage of the design

process from concept to production and marketing and the calculation of economic indicators of the feasibility of creating a collection of clothing or a comprehensive collection of clothing, footwear and accessories. They will confront the challenges of the real world of the fashion industry in creating their own vision of problems and solutions. Having received comprehensive knowledge of the basic principles of fashion business and scientific research, the team of students will be able to confidently work out the necessary recommendations.

Business and branding in the fashion industry include marketing and business systems as well as the introduction of visual culture in creating a graduation project. To create a diploma project at the level of the international fashion industry, a more thorough analysis of the current situation of the modern world business models of the fashion industry and the possibility of Ukraine's participation in different segments of the fashion market are necessary. The possibility to work in world-class projects offers the opportunity of participating in exhibitions, contests and high fashion weeks, thus becoming part of national and international advertising events in the fashion world. The process of conducting collaborative research, development and defence of an integrated graduation project by students of different specialties will help them in expanding knowledge in various fields. When working on an integrated diploma project, each member of the team carries out their own part of the project according to his or her specialty, but discusses the main idea and possible ways of its solution together. The specialization of each part of the complex project based on the specialty of graduates will enable more qualitative processing of each issue of the project, which in turn will form the value of the integrated project as an intellectual product.

The culmination of each integrated diploma project is no doubt its mandatory defense. It is possible to defend it in the form of a presentation of the project and invite potential buyers of intellectual product, industry professionals, teachers and graduates.

It should be noted that higher educational establishments of Ukraine maintain a high level of scientific and creative activity of scientific and pedagogical staff and students. In view of this, it can be stated that the volume of our manufactured intellectual products is sufficient. The problem of Ukrainian higher education establishments is the process of commercialization of intellectual products. Slowing down their commercialization is partly explained by the fact that Ukraine still does not have a developed infrastructure of the market for supplying innovations and proven mechanisms for the commercialization of intellectual products. Commercial realization of intellectual products becomes a necessity for further development of both the system of higher education and the country as a whole.

Perspectives of international cooperation in the sphere of creation and commercial use of intellectual products

In modern conditions, the barrier of territoriality of property rights to intellectual property may be overcome through international conventions. The State Department of Intellectual Property is co-operating with the European Patent Office. An important part of this cooperation is the implementation of contractual and legal work with foreign countries in the field of legal protection of intellectual property objects. Ukraine is a party to 20 international agreements under the following groups: intellectual property agreements, agreements on global safety, classifications agreements.

Cooperation between Ukraine and the European Union in the field of education allows for the coordination of qualification educational systems, promotes the development of

lifelong learning and increases the level of social adaptation of specialists and the social integration of workers and students. Within the framework of the Association Agreement with the EU, Ukraine has fulfilled its obligations to implement dual education for more than 50 professions.

This method of education involves increasing the hours of students' practical training at enterprises and acquiring practical skills by students directly at the enterprise (*Association Agreement, 2017*). "Recommendations of the European Parliament and the Council of Europe" recognize the value of education, the acquisition of practical skills by students and the recognition of the results of scientific and creative activities.

The process of reforming the education system in Ukraine, in particular the higher education system, is aimed at creating a common system of professional and higher education, harmonization of qualifications levels of Ukrainian specialists with qualifications levels of specialists of other European countries. (*Recommendations of the European Parliament and of the Council of 23 April 2008 on the establishment of a European qualifications framework for lifelong learning, 2008*).

The Ukrainian Science and Technology Center (STCU) has a successful experience in the commercial use of intellectual property of universities and academic institutes. The STCU is an international, intergovernmental organization that promotes partnerships, start-ups and industry licenses at universities. The process of commercialization of industrial property through the creation of start-up companies is slowly developing in Ukraine, but in the framework of international cooperation, this direction is most promising.

The slow development of start-up companies in Ukraine is explained by the fact that most universities and institutes of the Academy of Sciences are budgetary nonprofit organizations. It is believed that the rights to objects of intellectual property, which are created in budgetary organizations, belong to the state. Therefore, universities are not interested in the commercialization of intellectual property. Thanks to changes in the legislation of Ukraine regarding property rights to intellectual property objects and cooperation with EU countries, the process of introducing intellectual property into economic turnover is being accelerated.

In order for the intellectual property commercialization model to work fruitfully in Ukraine and bring profits to universities, it is advisable to create an extensive network of innovation funds and programs and to develop international cooperation in this field. In Ukraine, the process of amending certain legislative acts on intellectual (industrial) property is underway. Harmonized intellectual property legislation will expand the possibilities for obtaining ownership of intellectual property in European countries, which in turn will facilitate the expansion of cooperation.

Conclusions and suggestions

Ukraine has experience in creating and commercializing intellectual property objects and innovative potential, particularly in higher education establishments, which may be useful for international cooperation. The development of international innovation companies and the launch of innovative products on the basis of commercialization of intellectual property will promote economic growth and competitiveness of Ukraine as well as the European Union countries.

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